

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions and listings of claims in the application:

LISTING OF CLAIMS:

1. (currently amended): A catalyst for hydrotreating a hydrocarbon oil, which comprises an inorganic oxide support, wherein a phosphorous oxide is contained within the inorganic oxide support in an amount of 15% by weight or less and having provided thereon:

at least one selected from metals in Group 6 of the periodic table in an amount of from 10 to 40% by weight,

at least one selected from metals in Group 8 of the periodic table in an amount of from 1 to 15% by weight, ~~and~~

each in terms of respective oxides on the basis of the catalyst, and

carbon in an amount of from 2 to 14% by weight on the basis of the catalyst,

~~in terms of respective oxides on the basis of the catalyst,~~

wherein the catalyst has a specific surface area of from 100 to 400 m²/g, a pore volume of from 0.2 to 0.6 ml/g, and a mean pore diameter of from 50 to 200Å.
2. (previously presented): The catalyst for hydrotreating a hydrocarbon oil according to claim 1, wherein a ratio by weight between the metal in Group 8 of the periodic table and the metal in Group 6 of the periodic table as a value of [metal in the Group 8]/[(metal in the Group 8) + (metal in the Group 6)] is from 0.1 to 0.25 in terms of respective oxides.
3. (canceled).

4. (previously presented): A process for producing the catalyst for hydrotreating a hydrocarbon oil according to any one of claims 1, 2, and 8, which comprises supporting a metal in Group 6 of the periodic table so as to be at from 10 to 40% by weight, a metal in Group 8 of the periodic table so as to be at from 1 to 15% by weight in terms of respective oxides, and carbon so as to be at from 2 to 14% by weight on the basis of the catalyst, using a solution containing a compound containing at least one selected from metals in Group 8 of the periodic table, a compound containing at least one selected from metals in Group 6 of the periodic table, and an organic acid, on an inorganic oxide support containing a phosphorus oxide at 15% by weight or less on the basis of the support which has a specific surface area of from 230 to 500 m²/g, a pore volume of from 0.5 to 1 ml/g, and an mean pore diameter of from 40 to 180Å, followed by drying at 200°C or lower.

5. (previously presented): The process for producing the catalyst for hydrotreating a hydrocarbon oil according to claim 4, wherein the inorganic oxide support containing a phosphorus oxide is prepared by a kneading method of kneading a starting material of the inorganic oxide support and a starting material of the phosphorus oxide.

6. (previously presented): The process for producing the catalyst for hydrotreating a hydrocarbon oil according to claim 4, wherein the inorganic oxide support containing a phosphorus oxide is prepared by calcining at from 400°C to 700°C for from 0.5 to 10 hours.

7. (previously presented): A method for hydrotreating a hydrocarbon oil, wherein a catalytic reaction is carried out at a hydrogen partial pressure of from 0.7 to 8 MPa, a temperature of from 220 to 420°C, a liquid hourly space velocity of from 0.3 to 10 hr⁻¹ in the presence of the catalyst for hydrotreating a hydrocarbon oil according to any one of claims 1, 2 and 8.

8. (previously presented): The catalyst for hydrotreating a hydrocarbon oil according to claim 1, wherein the element in Group 6 of the periodic table is molybdenum, the carbon is derived from an organic acid, the inorganic oxide support contains a phosphorus oxide in an amount of 0.1 to 13% by weight on the basis of the support, the inorganic oxide support has further provided thereon a phosphorus oxide in which the total amount of the phosphorus oxide is 15% by weight or less and, the ratio by weight [P₂O₅/MoO₃] of the total weight of the phosphorus oxide to molybdenum oxide is 0.05 to 1.0.

9. (previously presented): The catalyst for hydrotreating a hydrocarbon oil according to claim 8, wherein the inorganic oxide support contains a phosphorus oxide in an amount of 1 to 13% by weight on the basis of the support.

10. (previously presented): The catalyst for hydrotreating a hydrocarbon oil according to claim 9, wherein the inorganic oxide support contains a phosphorus oxide in an amount of 1 to 10% by weight on the basis of the support.

11. (previously presented): The catalyst for hydrotreating a hydrocarbon oil according to claim 8, wherein a ratio by weight between the metal in Group 8 of the periodic table and molybdenum as a value of $[\text{metal in the Group 8}]/[(\text{metal in the Group 8}) + (\text{molybdenum})]$ is from 0.1 to 0.25 in terms of respective oxides.

12. (previously presented): The process for producing the catalyst for hydrotreating a hydrocarbon oil according to claim 4, wherein the element in Group 6 of the period table is molybdenum,

the carbon is derived from an organic acid,

the inorganic oxide support contains a phosphorus oxide in an amount of 0.1 to 13% by weight on the basis of the support,

the inorganic oxide support has further provided thereon a phosphorus oxide in which the total amount of the phosphorus oxide is 15% by weight or less and,

the ratio by weight $[\text{P}_2\text{O}_5/\text{MoO}_3]$ of the total weight of the phosphorus oxide to molybdenum oxide is 0.05 to 1.0.

13. (previously presented): The process for producing the catalyst for hydrotreating a hydrocarbon oil according to claim 12, wherein the inorganic oxide support contains a phosphorus oxide in an amount of 1 to 13% by weight on the basis of the support.

14. (previously presented): The process for producing the catalyst for hydrotreating a hydrocarbon oil according to claim 13, wherein the inorganic oxide support contains a phosphorus oxide in an amount of 1 to 10% by weight on the basis of the support.

15. (previously presented): The process for producing the catalyst for hydrotreating a hydrocarbon oil according to claim 12, wherein the inorganic oxide support containing a phosphorus oxide is prepared by a kneading method of kneading a starting material of the inorganic oxide support and a starting material of the phosphorus oxide.

16. (previously presented): The process for producing the catalyst for hydrotreating a hydrocarbon oil according to claim 12, wherein the inorganic oxide support containing a phosphorus oxide is prepared by calcining at from 400°C to 700°C for from 0.5 to 10 hours.